

05/14/14 Agenda

- Chapter 9 - Quadratic Functions & Equations
 - Unit Review

- Tomorrow - Finish Review

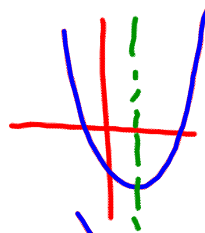
- **Test FRIDAY!!!**

Homework

- Work on Review Packet

Important things!!

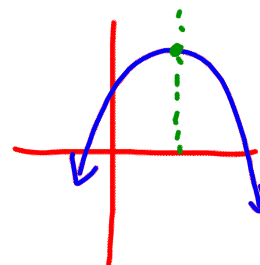
Axis of Symmetry:



$$x = \frac{-b}{2a}$$

Vertex:

$$\left(\frac{-b}{2a}, \text{SOLVE FOR IT!} \right)$$

Solutions on a graph:

ZEROS/ROOTS/X-INTERCEPTS
WHERE GRAPH CROSSES THE
X-AXIS

Zero Product Property (ZPP):

IF $a \cdot b = 0$
THEN $a = 0$ OR $b = 0$

- 1.) FACTOR POLYNOMIAL
- 2.) SET EACH TERM = 0
- 3.) SOLVE EACH EQUATION

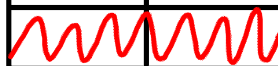
Quadratic Formula:

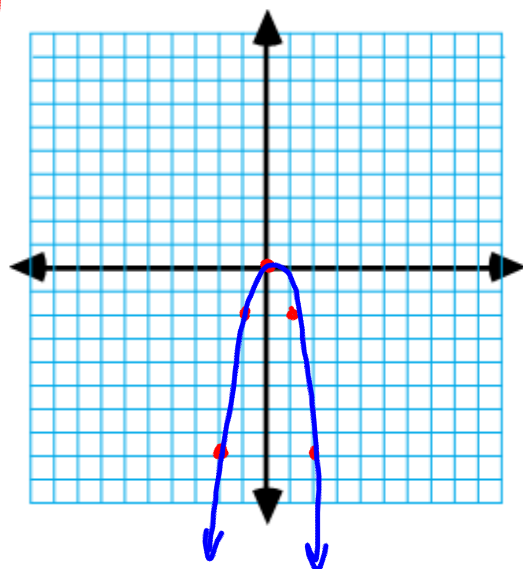
Discriminant:

Graph using a table:

$$y = -2x^2$$

$$y = -2(-1)^2$$

x	y
-2	-8
-1	-2
0	0
1	
2	
	



Graph using the Axis of Symmetry and the Vertex:

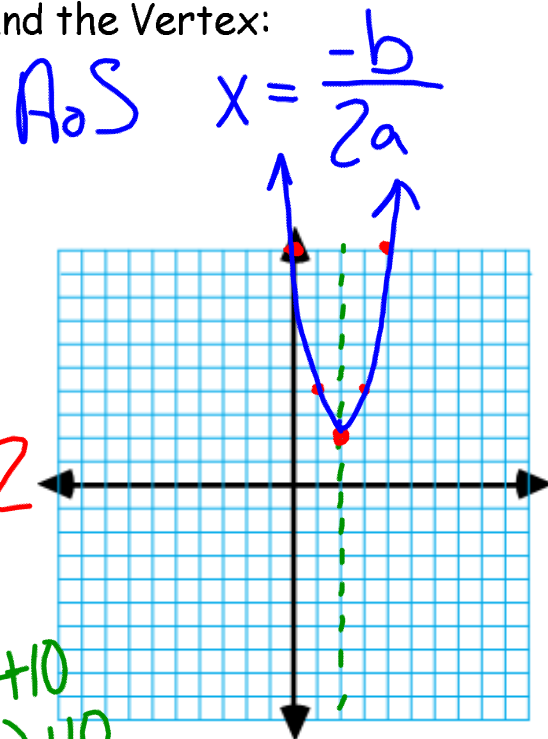
- a) Find the AoS
- b) Find the Vertex
- c) Graph
- d) Is Vertex a MAX or a MIN

$$y = 2x^2 - 8x + 10$$

$$\begin{aligned} A &= 2 \\ B &= -8 \\ C &= 10 \end{aligned}$$

$$x = \frac{-(-8)}{2(2)} = \frac{8}{4} = 2$$

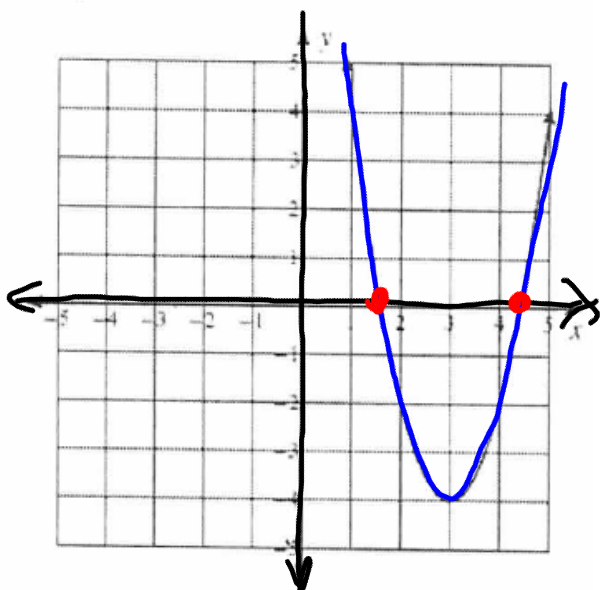
$$(2, 2) \quad y = 2x^2 - 8x + 10$$
$$2(1)^2 - 8(1) + 10$$
$$2 - 8 + 10$$



x	y
0	10
1	4

State the solutions:

9) $y = 2x^2 - 12x + 14$



$$x = 1.5$$
$$x = 4.3$$

Solve by factoring or using square roots!

11) $(7n+1)(n-6)=0$

$$\begin{array}{r} 7n+1=0 \\ -1 \quad -1 \\ \hline 7n = -1 \\ \frac{7n}{7} = \frac{-1}{7} \\ n = -\frac{1}{7} \end{array} \quad \begin{array}{r} n-6=0 \\ +6 \quad +6 \\ \hline n=6 \end{array}$$

14) $(x-2)^2=0$

$$\begin{array}{r} x-2=0 \\ +2 \quad +2 \\ \hline x=2 \end{array} \quad \begin{array}{l} (x-2)(x-2)=0 \\ x-2=0 \\ x=2 \end{array}$$

19) $m^2=8m-12$

$$\begin{array}{r} +12 \quad +12 \\ \hline m^2+12=8m \\ -8m \quad -8m \\ \hline m^2-8m+12=0 \end{array} \quad \begin{array}{l} m^2-8m+12=0 \\ (m-6)(m-2)=0 \end{array}$$

25) $7x^2+8=351$

$$\begin{array}{r} -8 \quad -8 \\ \hline 7x^2 = \frac{343}{7} \\ x^2 = 49 \end{array} \quad \begin{array}{l} x^2 = 49 \\ \sqrt{x^2} = \sqrt{49} \\ x = \pm 7 \end{array}$$